

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Cecile NOCERINO et al

Serial No.

Filed: Herewith

For: COMPOSITION PACKAGED IN AN AEROSOL DEVICE,
COMPRISING ALUMINA NANOPARTICLES

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to initial examination, please amend the application as follows:

IN THE SPECIFICATION:

Page 1, replace the second paragraph at lines 6-8 as follows:

--Products such as lacquers, foams and gels are well known in the art for styling the hair by fixing the individual hairs to one another.--

Page 1, replace the fourth paragraph at lines 13-16 as follows:

--U.S. Patent No. 3,819,827 by Wella discloses in particular products for setting of hair comprising from 0.2 to 6% by weight of aluminium oxide particles exhibiting a particle size of approximately 30 mμ.--

Page 1, replace the last paragraph at lines 17-25 as follows:

--The inventors have found, surprisingly and unexpectedly, that the use in an aerosol of nanoparticles comprising at least 10% by weight of alumina and exhibiting a number-average primary size of between 2 and 200 nm in a cosmetically acceptable medium makes it possible to give volume to the hair and to obtain styling without fixing and overloading the hair. The hair can then be styled and restyled at will while retaining a natural appearance.--

Page 2, replace the first paragraph at lines 1-3 as follows:

--The term "cosmetically acceptable medium" is understood to mean a medium which is compatible with the hair but which also has a pleasant smell, appearance and feel.--

Page 3, replace the second full paragraph at lines 5-11 as follows:

--Within the meaning of the present invention, the term "primary particle size" is understood to mean the maximum dimension which it is possible to measure between two diametrically opposite points of an individual particle. The size can be determined by transmission electron microscopy or from the measurement of the specific surface area by the BET method.--

IN THE CLAIMS:

Cancel claims 1-19 and substitute the following new claims therefor:

--20. (New) A composition packaged in an aerosol device comprising a liquid phase, which comprises, in a cosmetically acceptable medium, nanoparticles comprising at least 10% by weight of alumina and having a number-average primary size of between 2 and 200 nm, and a propellant which is dimethyl ether, a C₃₋₅ alkane, 1,1-difluoroethane, a mixture of dimethyl ether and a C₃₋₅ alkane, a mixture of 1,1-difluoroethane and dimethyl ether or a C₃₋₅ alkane, or a mixture of 1,1-difluoroethane and dimethyl ether and a C₃₋₅ alkane.

21. (New) The composition according to claim 20, wherein the number-average primary size of the nanoparticles is between 5 and 50 nm.
22. (New) The composition according to claim 20, wherein the nanoparticles comprising at least 10% by weight of alumina additionally comprise a metal or semimetal oxide other than alumina.
23. (New) The composition according to claim 22, wherein the metal or semimetal oxide is silicon oxide or boron oxide.
24. (New) The composition according to claim 20, wherein the nanoparticles comprise at least 50% by weight of alumina.
25. (New) The composition according to claim 20, wherein the nanoparticles are formed of more than 90% by weight of alumina.
26. (New) The composition according to claim 20, wherein the alumina is alumina or hydrated alumina.
27. (New) The composition according to claim 26, wherein the alumina is boehmite.
28. (New) The composition according to claim 20, wherein the amount of the nanoparticles is between 0.01 and 30% by weight with respect to the total weight of the composition.
29. (New) The composition according to claim 28, wherein the amount of the nanoparticles is between 0.05 and 5% by weight with respect to the total weight of the composition.
30. (New) The composition according to claim 20, wherein the propellant is dimethyl ether or a mixture containing dimethyl ether.

31. (New) The composition according to claim 20, wherein the propellant is present in an amount of between 2 and 90% by weight with respect to the total weight of the composition.
32. (New) The composition according to claim 31, wherein the propellant is present in an amount of between 40 and 80% by weight with respect to the total weight of the composition.
33. (New) The composition according to claim 20, wherein the cosmetically acceptable medium comprises water, a cosmetically acceptable solvent or water and a cosmetically acceptable solvent.
34. (New) The composition according to claim 33, wherein the solvent is a lower C₁-C₄ alcohol, a polyol, a polyol ether, acetone, or a mixture thereof.
35. (New) The composition according to claim 34, wherein the solvent is ethanol.
36. (New) The composition according to claim 33, wherein the water represents less than 20% by weight of the composition.
37. (New) The composition according to claim 20, wherein the liquid phase additionally comprises a cosmetic additive which is an adhesive agent, a reducing agent, a fatty substance, a thickening agent, a softener, an antifoaming agent, a screening agent, an antiperspirant, an acidifying agent, a basifying agent, a dye, a pigment, a fragrance, a preservative, a surfactant, a fixing or nonfixing polymer, a volatile or nonvolatile silicone, a vegetable, animal or mineral oil, a protein or vitamin, or mixtures thereof.
38. (New) The composition according to claim 37, wherein the composition further comprises a vinyl lactam homopolymer or copolymer.

39. (New) A process for the cosmetic treatment of hair, comprising applying to the hair and optionally rinsing the hair after an optional setting time a composition discharged from an aerosol device, the composition packaged in the aerosol device comprising in a cosmetically acceptable medium, nanoparticles comprising at least 10% by weight of alumina and having a number-average primary size of between 2 and 200 nm, and a propellant which is dimethyl ether, a C₃₋₅ alkane, 1,1-difluoroethane, a mixture of dimethyl ether and a C₃₋₅ alkane, a mixture of 1,1-difluoroethane and dimethyl ether or a C₃₋₅ alkane, or a mixture of 1,1-difluoroethane and dimethyl ether and a C₃₋₅ alkane.

40. (New) The process of claim 39, wherein the composition is a styling product.

41. (New) The process of claim 39, wherein the composition is a leave-in styling product.--

REMARKS

The foregoing amendments include editorial changes to the specification and the presentation of new claims 20-41 to replace cancelled claims 1-19.

Attached hereto is a marked-up version of the changes made to the specification by the present amendment. The attachment is captioned "Version With Markings To Show Changes Made."

In view of the foregoing, early action on the merits is respectfully requested.

Respectfully submitted,

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for

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

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IN THE CLAIMS:

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